

REMARKS

Please reconsider the present application in view of the above amendments and the following remarks. Applicant thanks the Examiner for carefully considering the present application.

I. Disposition of Claims

Claims 1-38 are currently pending in the present application. By way of this reply, claims 1, 9, 17, 25, and 33 have been amended and new claim 39 has been added.

II. Claim Amendments

Independent claims 1, 9, 17, 25, and 33 have been amended to include the limitations that (1) the natural polymer is used as a viscosifying agent and (2) the miscible amine is used in an amount effective to prevent substantial decomposition of the natural polymer as the well fluid is used. No new matter has been added by way of these amendments as support for these amendments may be found, for example, in paragraphs [0016] and [0030] of the present application.

III. Rejection(s) Under 35 U.S.C § 112

Claims 1-38 were rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. Particularly, the Examiner asserted that the Specification fails to teach the mixture of particular fluids in the absence of a cross-linkant and a bentonite. By way of this reply, these limitations have been removed from amended independent claims 1, 9, 17, 25, and 33 of the present application, and

accordingly, this § 112, first paragraph rejection is now moot.

IV. Rejection(s) Under 35 U.S.C § 102

Claims 1, 2, 9, 10, 17, 18, 25, 26, 33, and 34 of the present application were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,227,295 issued to Mitchell et al. (hereinafter "Mitchell"). For the reasons set forth below, this rejection is respectfully traversed.

The present invention is directed to a well fluid for oil-field drilling applications. The well fluid is formed by mixing a miscible amine (e.g., triethanol amine (TEA)) and a natural polymer (e.g., hydroxyethyl cellulose (HEC)) that is used as a viscosifying agent to provide the well fluid with relatively high viscosity. In previous well fluid compositions, in which a miscible amine was not sufficiently admixed with the natural polymer, the natural polymer tended to decompose as well fluid temperatures increased. Such decomposition led to a significant reduction in the viscosity of the well fluid. *See* Specification, paragraph [0030].

To address this problem, Applicant has formulated a well fluid composition in which a miscible amine is admixed with the natural polymer in an amount effective to prevent substantial decomposition of the natural polymer as the well fluid is used (*i.e.*, in use during drilling operations). The resultant increased thermal stability caused by the mixing of a miscible amine is discussed in paragraphs [0051] and [0052] of the present application. Accordingly, amended independent claims 1, 9, 17, 25, and 33 of the present invention require, in part, that a miscible amine be mixed in well fluid, which includes a natural polymer used as a viscosifying agent, *in an amount effective to prevent*

substantial decomposition of the natural polymer as the well fluid is used.

Mitchell, in contrast, fails to disclose, or otherwise teach, all the limitations recited in independent claims 1, 9, 17, 25, and 33 of the present application. Mitchell is directed to a well fluid composition for extending or producing a fracture in a formation so as to increase the flow of hydrocarbons from the formation to the well bore. To achieve this, Mitchell discloses a well fluid composition that uses a cross-linkant that substantially increases the cross-linking of a polymer (thereby, increasing the viscosity of the well fluid) at and above certain temperatures. *See* Mitchell, column 4, lines 21 – 35. Mitchell further discloses using an amine as a stabilizing agent. *See* Mitchell, column 5, lines 17 – 37. However, it is the cross-linking agent of Mitchell, not the amine, that is used to increase the viscosity of the well fluid at increased temperatures. Mitchell is altogether silent as to whether the amine is used in such a way to prevent substantial decomposition of a natural polymer in the well fluid. Accordingly, Mitchell fails to disclose, and actually teaches away from, a miscible amine that is mixed in a well fluid in an amount effective to prevent substantial decomposition of a natural polymer in the well fluid as required by amended independent claims 1, 9, 17, 25, and 33 of the present application.

With respect to Baranet, which was cited in the Office Action of February 13, 2002, Baranet discloses a well fluid formed using various organometallic crosslinkers to crosslink polysaccharides for improved stability. *See* Baranet, column 4, lines 8 – 18. Thus, similar to Mitchell, Baranet discloses the use of a cross linking agent to increase the stability of a well fluid. Further, like Mitchell, Baranet discloses the use of an amine in “a small but stabilizing amount.” Baranet, column 3, lines 55 – 62. In other words,

Baranet discloses using an amine as a stabilizing agent, not as an agent that is mixed in an amount effective to prevent substantial decomposition of a natural polymer as the well fluid is used as required by amended independent claims 1, 9, 17, 25, and 33 of the present application.

With respect to Glass, cited in the Office Action of February 13, 2002, Glass, also directed to well fluid compositions, discloses, only in Example 14, the use of an amine. *See* Glass, column 23, lines 52 – 64. However, this example uses the amine, which is described in Glass as a secondary additive (Glass, column 11, lines 54 – 60), only as part of a test to assess the ability of the amine to beneficiate bentonite in a saline solution. *See* Glass, column 9, lines 36 – 40. Glass is not at all concerned with using an amine in an amount effective to prevent substantial decomposition of a natural polymer as a well fluid is used as required by amended independent claims 1, 9, 17, 25, and 33 of the present application.

In view of the above, Mitchell, Glass, and Baranet, each fail to show or suggest the present invention as recited in independent claims 1, 9, 17, 25, and 33 of the present application. Thus, independent claims 1, 9, 17, 25, and 33 of the present application are patentable over Mitchell. Dependent claims are allowable for at least the same reasons. Accordingly, withdrawal of this rejection is respectfully requested.

V. Priority Acknowledgement

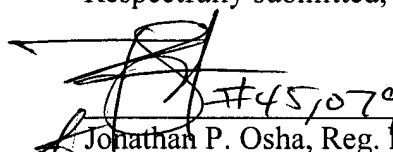
Moreover, the Applicant notes that the Examiner has failed to recognize Applicant's claim for domestic priority, pursuant to 35 USC 119(e) to U.S. Application Serial No. 60/295,381, filed June 1, 2001. Acknowledgement of same is respectfully requested.

VI. Conclusion

The above remarks are believed to require no further prior art search. Also, Applicant believes this reply to be responsive to all outstanding issues and place this application in condition for allowance. If this belief is incorrect, or other issues arise, do not hesitate to contact the undersigned or his associates at the telephone number listed below. Please apply any charges not covered, or any credits, to Deposit Account 50-0591 (Reference Number 05542.00802).

Date: 11/24/03

Respectfully submitted,


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